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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/692,025	10/22/2003	Jeonghee Yi	ARC920030026US1	6416

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EXAMINER

COLUCCI, MICHAEL C

ART UNIT	PAPER NUMBER
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2626

MAIL DATE	DELIVERY MODE
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10/10/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/692,025	Applicant(s) YI ET AL.	
	Examiner Michael C. Colucci	Art Unit 2626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10,12 and 14-17 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 10,12 and 14-17 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>10/22/03</u> | 6) <input type="checkbox"/> Other: ____ |

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Please note: The art unit listed on applications sent on or after 8/20/2007 has changed from 2609 to 2626. Examiner assigned to case still remains.

DETAILED ACTION

Response to Amendment

1. Applicants amendment filed September 13, 2007 overcomes the following rejection/objection:

- 103 rejection of claims 10, 12, and 14-17:

Response to Arguments

2. Applicant's arguments, see Remarks page 8, filed September 13, 2007, with respect to the rejection(s) of claim(s) 10, 12, and 14-17 under 35 U.S.C. 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Addison et al US 6865533 B2 (herein after Addison) and Pertrushin US 6151571 A (herein after Pertrushin).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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The factual inquiries set forth in **Graham v. John Deere Co., 383 U.S. 1, 148 USPQ 459 (1966)**, that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows: (See MPEP Ch. 2141)

- a. Determining the scope and contents of the prior art;
- b. Ascertaining the differences between the prior art and the claims in issue;
- c. Resolving the level of ordinary skill in the pertinent art; and
- d. Evaluating evidence of secondary considerations for indicating obviousness or nonobviousness.

4. Claims 10, 12, and 14-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Addison et al US 6865533 B2 (herein after Addison) in view of Pertrushin US 6151571 A (herein after Pertrushin).

Re claim 10, Addison discloses a method for extracting opinions about a subject of interest from a text document ("a text is received into the memory of the computing device...the marked up text is then is then phonetically parsed using phonetic parsing rules"; Addison col 3 line 8-21) having a plurality of sentences, the subject associated with a plurality of features ("certain inflection, pauses, or accenting can be inferred...pragmatic rules match the specific voice feature with the marked up linguistic features..."; Addison col 12 line 1-15), the method comprising.

extracting from the document feature terms related to the features most relevant to the subject ("certain inflection, pauses, or accenting can be inferred...pragmatic rules match the specific voice feature with the marked up linguistic features..."; Addison col 12 line 1-15)

for each sentence referring to a feature term, determining whether the sentence includes an opinion polarity ("recognize the meaning of the text and to identify the

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emotional nature of the message..."; Addison col 27 line 47 – col 28 line 7) about the feature term ("influenced prosody changes, based on the words in the text and their sequence"; Addison col 3 line 55-63); and for each sentence referring to the subject, determining whether the sentence includes an opinion polarity about the subject ("recognize the meaning of the text and to identify the emotional nature of the message..."; Addison col 27 line 47 – col 28 line 7) comprises.

(An opinion polarity is construed as the emotion of a term such as negative or positive expressions assigned by recognition of the emotion/opinion of a part of the sentence)

identifying opinion terms in the sentence using an opinion dictionary ("the word list is processed using dictionary information..."; Addison col 7 line 56 – col 8 line 15), each entry in the dictionary having an opinion term ("the lexicon comprises linguistic units divided into four classes"; Pertrushin col 58 line 42-54 & Fig. 2), a part-of-speech tag ('Part of Speech', Addison fig. 1), and an associated opinion polarity ("yielding a corpus containing 700 utterances with 140 utterances per emotional state..."; Pertrushin col 10 line 23-33)

Addison fails to teach a dictionary or similar table having an opinion term and an associated polarity.

Both Addison and Pertrushin teach a dictionary/lexicon used to store terms and information related to the terms. Pertrushin teaches a corpus with utterances for each emotional state (Pertrushin col 10 line 23-33). Pertrushin also teaches terms such as

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adverbs, verbs, adjectives, and conjunctions, where these word types are a part of speech.

Therefore, the combined teaching of Addison and Pertrushin as a whole would have rendered obvious a dictionary containing an opinion term, opinion polarity, and a part of speech tag. Storing recognized emotion/opinion terms and the associated polarity would aid in the training process for recognizing parts of speech.

for each sentence having a feature term and an opinion term, parsing the sentence with an English parser ('26' & '28' Addison fig. 1) to identify grammatical components ("generating three tokens for each word..."; Addison col 9 line 46-60) in the sentence and relationships between said components ("connectors that specify relationships between two or more nominal terms..."; Pertrushin col 58 line 42-54 & Fig. 2), and identifying an opinion polarity ("recognize the meaning of the text and to identify the emotional nature of the message..."; Addison col 27 line 47 – col 28 line 7) associated with said feature term ("certain inflection, pauses, or accenting can be inferred...pragmatic rules match the specific voice feature with the marked up linguistic features..."; Addison col 12 line 1-15) using the opinion dictionary ("the word list is processed using dictionary information..."; Addison col 7 line 56 – col 8 line 15).

Addison fails to specifically disclose the identification of a relationship between components.

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Pertrushin teaches the specification of the relationship between two or more nominal terms where the relationship is described in terms of action (Pertrushin col 58 line 42-54).

Therefore, the combined teaching of Addison and Pertrushin as a whole would have rendered obvious identifying grammatical components in a sentence and relationships between components prior to the identification of opinion terms and polarity.

Re claim 12, the combined teaching of Addison and Pertrushin disclose a method as recited in claim 10, wherein the opinion polarity associated with the feature term is identified based on an opinion rule ("a text is received into the memory of the computing device...the marked up text is then is then phonetically parsed using phonetic parsing rules"; Addison col 3 line 8-21).

Re claim 14, the combined teaching of Addison and Pertrushin disclose a method as recited in claim 12, wherein the rule base comprises a plurality of rules ("a text is received into the memory of the computing device...the marked up text is then is then phonetically parsed using phonetic parsing rules"; Addison col 3 line 8-21) each having a relationship term ("connectors that specify relationships between two or more nominal terms..."; Pertrushin col 58 line 42-54 & Fig. 2), a target of the opinion ("nominative terms"... "connectors"; Pertrushin Fig. 6 & "selecting an emotion from the database based on comparison of the extracted voice feature to the voice parameter";

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tables 2 and 10), and a polarity of the opinion ("recognize the meaning of the text and to identify the emotional nature of the message..."; Addison col 27 line 47 – col 28 line 7)

Addison fails to teach a target of an opinion as part of a plurality of rules.

Pertrushin teaches a database accessed for comparison to voice features. The database as taught by Pertrushin contains parts of speech and what Pertrushin refers to as descriptors that describe a term (i.e. correct, wrong, weak, strong). A set of opinion rules and an opinion dictionary are construed to be both functionally equivalent to one another.

Therefore, the combined teaching of Addison and Pertrushin as a whole would have rendered obvious rules having a target of an opinion in addition to a polarity of opinion.

Re claim 15, the combined teaching of Addison and Pertrushin disclose a "method as recited in claim 12, wherein the rule base comprises a plurality of rules each having a relationship term, a source of the opinion, and a target of the opinion ("nominative terms"... "connectors"; Pertrushin Fig. 6 & "selecting an emotion from the database based on comparison of the extracted voice feature to the voice parameter"; tables 2 and 10)"

(The source of the opinion is construed a the portion of text that contains an opinion term, polarity, and target.)

Re claim 16, the combined teaching of Addison and Pertrushin disclose a "method as recited in claim 15, wherein the target of the opinion ("nominative terms"... "connectors"; Pertrushin Fig. 6 & "selecting an emotion from the database based on comparison of the extracted voice feature to the voice parameter"; tables 2 and 10) is a component of the sentence to which the opinion is to be assigned ("recognize the meaning of the text and to identify the emotional nature of the message..."; Addison col 27 line 47 – col 28 line 7)

Re claim 17, the combined teaching of Addison and Pertrushin disclose a "method as recited in claim 15, wherein the source of the opinion ("nominative terms"... "connectors"; Pertrushin Fig. 6 & "selecting an emotion from the database based on comparison of the extracted voice feature to the voice parameter"; tables 2 and 10) is a component of the sentence of which opinion polarity is to be assigned to the target ("recognize the meaning of the text and to identify the emotional nature of the message..."; Addison col 27 line 47 – col 28 line 7)"

Contact

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael C. Colucci whose telephone number is (571)-270-1847. The examiner can normally be reached on 9:30 am - 6:00 pm, Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil can be reached on (571)-272-7602. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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